

2/2 032

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0124790

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE 3 LAYER NONABSORBING
DIFFRACTION SELECTOR WITH A ZNS LAYER OF THICKNESS 3 LAMBDA-4 WAS ABLE
TO GENERATE A SINGLE FREQUENCY EMISSION OF THE HE,NE LASER WITH
60-70PERCENT EFFICIENCY.

UNCLASSIFIED

1/2 009 UNCLASSIFIED PROCESSING DATE--16OCT70
TITLE--DEPENDENCE OF THE CAST IRON FLOW FACTOR ON THE GEOMETRY OF CASTING
CHANNELS OF A MOLD -U-
AUTHOR-(04)-PETRICHENKO, A.M., GLIZER, Z.KH., GOLDMAKHER, P.E.,
LUKASHCHUK, T.I.
COUNTRY OF INFO--USSR
SOURCE--LITEINOE PROIZVOD. 1970, 2, 30-1
DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS, MECH., IND., CIVIL AND MARINE ENGR
TOPIC TAGS--CAST IRON, FOUNDRY TECHNOLOGY, FERROUS LIQUID METAL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1995/1376

STEP NO--UR/0129/70/002/000/0030/0031

CIRC ACCESSION NO--AP0116825

UNCLASSIFIED

2/2 009

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0116825

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AN EXPTL. MOLD ALLOWING A SIMULTANEOUS OUTFLOW OF MOLTEN IRON THROUGH 4 CHANNELS HAS BEEN USED TO DET. THE INFLUENCE OF THE SHAPE OF THE CHANNEL CROSS SECTION ON THE FLOW FACTOR. A FLAT CHANNEL WITH A PLANE UPPER SURFACE AND A CYLINDRICAL BOTTOM ONE, FORMED WITH A LARGE RADIUS, SHOWS THE HIGHEST FLOW FACTOR (0.61-0.63), LEAST AFFECTED BY VARIATIONS OF THE METAL TEMP. EXPTS. WITH RECTANGULAR SECTIONS SHOW THAT MAX. FLOW IS OBTAINED WHEN THE WIDTH TO HEIGHT RATIO IS 3:1. APPROACHING A SQUARE CROSS SECTION CAUSES THE FLOW FACTOR TO FALL.

4

UNCLASSIFIED

USSR

UDC: 535.376

~~GOL'DMAN, A. G.~~, deceased, PROSKURA, A. I., KRICHEVETS, A. M., Institute of Physics, Academy of Sciences of the UkrSSR, Kiev

"Interaction of Electroluminescence and Photoconductivity During Switching in ZnCdS-Cu,Mn Phosphor Crystals"

Kiev, Ukrainskiy Fizicheskii Zhurnal, Vol 17, No 7, Jul 72, pp 1148-1151

Abstract: Conductivity switching is studied in polycrystal electrophosphors. It is shown that conductivity can be amplified by absorption of self-radiation by a photoconductive electrophosphor and induction of photocurrent. The photoconductivity accompanying induced electroluminescence was sustained by the effect of the electroluminescent emission. The triggering of electroluminescence was studied as well as the spectral characteristics of switching, temperature quenching of high conductivity, and the kinetics of conductivity. ZnCdS-Cu,Mn solid solutions were studied at 77°K. Switching was based on amplification of dark conduction by a factor of 10^5 - 10^{10} in the presence of a light source. Either the action of the light was combined with a constant electric field (40 kv/cm) or else the electric field was applied after illumination. Electroluminescence occurred simultaneously with amplification of conductivity. It is shown that the switching effect involves positive feedback between electroluminescence brightness and the self-induced photocurrent.

1/1

USSR

GOLDMAN, A. G.; PROSKURA, A. I.; KRICHEVETS, A. M.

"Electroluminescence and Stimulated Conductivity of ZnCdS Tablets"

Minsk, Zhurnal Prikladnoy Spektroskopii; August, 1972; pp 269-74

ABSTRACT: Baked polycrystalline tablets were used as convenient samples in the complex study of electroluminescence and stimulation of conductivity in ZnCdS. As an example, the authors studied the electroluminescence near the cathode and the stimulation of conductivity in photoconducting tablets with $\text{Zn}_{30}\text{Cd}_{70}\text{S}$ as a base at a temperature of 77°K. To obtain the tablets activated powder was first subjected to a pressure of 200 atmospheres and then sintered while being heated to 700°C. The electroluminescence spectra of ZnCdS, ZnCdS-Sm, and ZnCdS-Cu tablets consisted of bands with a maximum near 530 nm. Bands with maxima at 450, 490, and 580 nm respectively were observed in the photoconductivity spectra.

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USSR

GOLDMAN, A. G., et al., Zhurnal Prikladnoy Spektroskopii; August, 1972; pp 269-74

In the presence of an average field strength of $4 \cdot 10^4$ v/cm electroluminescence with a brightness up to 1 nit appeared simultaneously with an increase in conductivity. The luminescence disappeared at a temperature of about 190°K. The electroluminescent characteristics were typical for the so-called shock mechanism of luminescence excitation. It was assumed that with a reabsorption of the electroluminescent radiation the conductivity of the tablets in the stimulated state can increase still more by the application of photocurrent.

The article includes 4 figures. There are 8 references.

2/2

- 65 -

USSR

UDC 535.376 + 535.377 + 537.226.8

GOL'DMAN, A. G., PYSENYY, M. M., and PROSKURA, A. I., Institute of Physics, Academy of Sciences Ukrainian SSR, Kiev

"Excitation Spectrum of Cadmium Selenide Photoconductivity and Stimulated Conductivity at 77° K"

Kiev, Ukrainskiy Fizicheskiy Zhurnal, Vol 16, No 3, Mar 71, pp 503-505

Abstract: Soviet photoresistors of the FS-D1 type were used to study the excitation spectra of cadmium selenide photoconductivity and stimulated conductivity at 77° K in the 500-1250 nm region. It was found that stimulated conductivity builds up to saturation under light excitation of any wavelength between 700 and 1100 nm. The current stimulated to saturation in cadmium selenide cells does not depend on the excitation wavelength between 700 and 1100 nm. The red stimulation boundary is situated near 1200 nm. In the photoconductivity spectrum the photoconductivity peak is situated around 800 nm and the red boundary near 1050 nm.

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USSR

UDC: 535.376

GOL'DMAN, A. G., KOROL'KO, B. N., LYSENKO, S. P., and STEPANCHENKO, E. S.

"Effect of Cobalt on the Electroluminescence of ZnS-Cu and the Infrared Electroluminescence of CdS-Cu, Co"

Minsk, Zhurnal Prikladnoy Spektroskopii, Vol. 13, No. 3, September 1970, pp 464-467

Abstract: In this short article, the authors report an increase in the number of electrons in traps with energy of 0.2-0.4 eV in the electroluminophores ZnS-Cu by the addition of small quantities of cobalt, at a concentration of 10^{-6} g-atoms per g-mole of ZnS, with a consequent increase in the intensity of their emitted phosphorescence. They found also that a somewhat larger amount of cobalt added to CdS also increased the electron concentration in the traps and led to a maximum infrared electroluminescence at 0.8μ . Their specimens of ZnS and CdS were activated by copper from a

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USSR

KAZANSKAYA, N. A., et al., Optika i Spektroskopiya, Vol 28, No 3, Jun 70, pp 1150-1158

$\frac{k_t}{\int_0}$. There was found to be a correlation between long-wave displacement λ_{max} and the value of $\frac{k_t}{\int_0}$ in the complexes, corresponding to growth of covalency of the oxygen-rare earth ion bond, and the value of $\frac{k_t}{\int_0}$. It is shown that the absence of luminescence in a number of Eu^{3+} and Sm^{3+} complexes is due to the appearance of a new long-wave absorption band -- a band of electron transfer from the organic part to a rare earth ion, with reduction of the latter to a doubly charged state.

2/2

205 nm) and fundamental absorption ($\lambda_{\text{port}} = 253 \text{ nm}$). Extinguishing the phosphorescence in the initial stages consists of two components -- exponential and hyperbolic -- while the later stages strictly follow a hyperbolic law.

The article includes two figures. There are 5 references.

1/1

1/2 009
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LUKASHCHUK, T.I.
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DATE PUBLISHED-----70

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TOPIC TAGS--CAST IRON, FOUNDRY TECHNOLOGY, FERROUS LIQUID METAL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1995/1376

STEP NO--UR/0128/70/002/000/0030/0031

NO--AP0116825

UNCLASSIFIED

PROCESSING DATE--16OCT70

2/2 009

CIRC ACCESSION NO--AP0116825

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AN EXPTL. MOLD ALLOWING A SIMULTANEOUS OUTFLOW OF MOLTEN IRON THROUGH 4 CHANNELS HAS BEEN USED TO DET. THE INFLUENCE OF THE SHAPE OF THE CHANNEL CROSS SECTION ON THE FLOW FACTOR. A FLAT CHANNEL WITH A PLANE UPPER SURFACE AND A CYLINDRICAL BOTTOM ONE, FORMED WITH A LARGE RADIUS, SHOWS THE HIGHEST FLOW FACTOR (0.61-0.68), LEAST AFFECTED BY VARIATIONS OF THE METAL TEMP. EXPTS. WITH RECTANGULAR SECTIONS SHOW THAT MAX. FLOW IS OBTAINED WHEN THE WIDTH TO HEIGHT RATIO IS 3:1. APPROACHING A SQUARE CROSS SECTION CAUSES THE FLOW FACTOR TO FALL.

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USSR

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USSR

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The article includes 4 figures. There are 8 references.

2/2

- 65 -

UDC 535.376 + 535.377 + 537.226.8
USSR

GOLDMAN, A. G., PYSHNYI, M. M., and PROSKURA, A. I., Institute
of Physics, Academy of Sciences Ukrainian SSR, Kiev

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Stimulated Conductivity at 77° K"

Kiev, Ukrainskiy Fizicheskii Zhurnal, Vol 16, No 3, Mar 71, pp
503-505

Abstract: Soviet photoresistors of the FS-D1 type were used to
study the excitation spectra of cadmium selenide photoconductivi-
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tween 700 and 1100 nm. The red stimulation boundary is situated
near 1200 nm. In the photoconductivity spectrum the photoconduc-
tivity peak is situated around 800 nm and the red boundary near
1050 nm.

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USSR

UDC: 535.376

GOL'DMAN, A. G., KOROL'KO, B. N., LYSENKO, S. F., and STEPANCHENKO, E. S.

"Effect of Cobalt on the Electroluminescence of ZnS-Cu and the Infrared Electroluminescence of CdS-Cu, Co"

Minsk, Zhurnal Prikladnoy Spektroskopii, Vol. 13, No. 3, September 1970, pp 464-467

Abstract: In this short article, the authors report an increase in the number of electrons in traps with a depth of 0.2-0.4 eV in the electroluminophores ZnS-Cu by the addition of small quantities of cobalt, at a concentration of 10^{-6} g-atoms per g-mole of ZnS, with a consequent increase in the intensity of their emitted phosphorescence. They found also that a somewhat larger amount of cobalt added to CdS also increased the electron concentration in the traps and led to a maximum infrared electroluminescence at 0.8μ . Their specimens of ZnS and CdS were activated by copper from a

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USSR

KAZANSKAYA, N. A., et al., Optika i Spektroskopiya, Vol 28, No 6, Jun 70, pp 1150-1158

$\frac{k_t}{\int_0}$. There was found to be a correlation between long-wave displacement of the absorption band of $Tb^{3+} 7F_6 \rightarrow 5D_4$ in the complexes, corresponding to growth of covalency of the oxygen-rare earth ion bond, and the value of $\frac{k_t}{\int_0}$. It is shown that the absence of luminescence in a number of Eu^{3+} and Sm^{3+} complexes is due to the appearance of a new long-wave absorption band -- a band of electron transfer from the organic part to a rare earth ion, with reduction of the latter to a doubly charged state.

Optics & Spectroscopy

USSR

G
GOLDMAN, A. G.; ROMANENKO, I. L.

"Phosphorescence after Electroluminescence of SrS-Cu and Eu Phosphors"

Leningrad, Optika i Spektroskopiya; March, 1970; pp 502-3

Δ Δ Δ

ABSTRACT: A prolonged phosphorescence of europium centers after the electroluminescence of SrS-Cu and Eu phosphors was discovered. The phosphorescence spectrum after electroperturbation coincides with the spectrum of ordinary phosphorescence after photoperturbation in the region of impurity ($\lambda_{\text{pert}} = 365 \text{ nm}$) and fundamental absorption ($\lambda_{\text{pert}} = 253 \text{ nm}$). Extinguishing the phosphorescence in the initial stages consists of two components -- exponential and hyperbolic -- while the later stages strictly follow a hyperbolic law.

The article includes two figures. There are 5 references.

1/1

1/2 022
TITLE--PHOSPHORESCENCE AFTER ELECTROLUMINESCENCE OF SRS, CU AND EU
PHOSPHORS -U-
AUTHOR--(021)-GOLDMAN, A.G., ROMANENKO, I. 6
COUNTRY OF INFO--USSR
SOURCE--LENINGRAD, OPTIKA I SPEKTROSKOPIYA; MARCH, 1970; PP 502-503
DATE PUBLISHED-----70
SUBJECT AREAS--PHYSICS
TOPIC TAGS--PHOSPHORESCENCE, ELECTROLUMINESCENCE, EUROPIUM
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PAGE/FRAME--3003/0278
STEP NO--UR/0051/70/000/000/0502/0503
PROCESSING DATE--2/NOV/71

2/2 022

CIRC ACCESSION NO--AP0129511
ABSTRACT/EXTRACT--(U) GP-0-

UNCLASSIFIED

PROCESSING DATE--27NOV70

ABSTRACT. A PROLONGED PHOSPHORESCENCE OF
EUROPIUM CENTERS AFTER THE ELECTROLUMINESCENCE OF SRS-CU AND EU
PHOSPHORS WAS DISCOVERED. THE PHOSPHORESCENCE SPECTRUM AFTER
ELECTROPERTURBATION COINCIDES WITH THE SPECTRUM OF ORDINARY
PHOSPHORESCENCE AFTER PHOTOPERTURBATION IN THE REGION OF IMPURITY (λ_{PERT} EQUALS 365 NM) AND FUNDAMENTAL ABSORPTION (λ_{PERT} EQUALS 253 NM). EXTINGUISHING THE PHOSPHORESCENCE IN THE INITIAL STAGES
CONSISTS OF TWO COMPONENTS, EXPOTENTIAL AND HYPERBOLIC, WHILE THE LATER
STAGES STRICTLY FOLLOW A HYPERBOLIC LAW.

UNCLASSIFIED

USSR

UDC 535.367+ 535.377 + 537.226.8
GOLDMAN, A. G., PYSHNYI, M. M., Institute of Physics, Academy of Sciences, Ukr. SSR

"Variation of Stimulated and Nonstimulated Current in Polycrystalline CdSe with Temperature at 77-273°K"

Moscow, Doklady Akademii Nauk SSSR, Vol 193, No 1, 1 July 1970, pp 65-68

Abstract: In FS-D0 and FS-D1 polycrystalline powdered CSe photo-conductor cells a stimulation effect was displayed which was of the same order of magnitude as that found in investigations of specific CdS monocrystals described in the literature. With the FS-D0 tablet, the ratio of the stimulated to the unstimulated current measured at a temperature of 155°K equalled 10^6 and there was a considerable intensification of this ratio with a further reduction of temperature. The stimulated current in the temperature range 77 to 273°K was found not to depend on the temperature. Curves in logarithmic coordinates are shown for the volt-ampere characteristics of polycrystalline CdSe at temperatures of 77°, 155°, 186°, 237°, and 273°K. In the portion

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USSR

GOL'DMAN, A. G., et al, Doklady Akademii Nauk SSSR, Vol 193, No 1,
1 July 1970, pp 65-68

< 100 the logarithmic curves for nonstimulated currents have an approximately linear form: i.e., the current is found to depend, in a degree, on the voltage, and this degree increases with a decrease of temperature. The dependence of $\log I$ of nonstimulated currents on T^{-1} in polycrystalline CdSe is also shown. 2 fig. 14 ref. Received by editors, 5 Nov 1969.

2/2

- 70 -

Organophosphorous Compounds

USSR

UDC 541.621'49:546.733'18'86:547.442.2

ABLOV, A. V., BOTOSHANSKIY, M. K., SIMONOV, YU. A., MALINOVSKIY, T. I.,
GOL'DMAN, A. M., and BOLOGA, O. A., Institute of Applied Physics, Academy of
Sciences USSR, Institute of the Chemistry, Academy of Sciences USSR, Kishinev

"A New Kind of Stereoisomerism in trans-Dioximinates of Cobalt (III) With
Triphenylphosphine and Triphenylstibine"

Moscow, Doklady Akademii Nauk SSSR, Vol 206, No 4, Oct 72, pp 863-865

Abstract: In an earlier publication it was reported that triphenylphosphine,
triphenylarsine, and triphenylstibine can easily replace water in trans-
acidoaquadioximinates of cobalt (III) forming compounds $[CoX(DH)_2EPH_3]$

where X = Cl, Br, or I, and E = P, As or Sb. Furthermore, it was shown that
these products occur as mixtures of two modifications. This paper covers
x-ray diffraction studies of such compounds. The experimental results
obtained show that cobalt (III) dioximinates exhibit an unique case of stereo-
isomerism. Both modifications are in trans-configuration; in one case two
chelate units DH are located in a plane, in the other the DH chelate
planes are at an angle to each other, the cobalt atom being moved out of the
center of the octahedron.

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1/2 013
UNCLASSIFIED
PROCESSING DATE--04DEC70
TITLE--DETERMINATION OF NITRIC ACID CONSUMPTION DURING THE PRODUCTION OF
ADIPIC ACID FROM CYCLOHEXANOL -U-
AUTHOR--(03)--PREOBRAZHENSKIY, V.A., GOLDMAN, A.M., FURMAN, M.S.
COUNTRY OF INFO--USSR
SOURCE--KHIM. PROM. (MOSCOW) 1970. 46(3), 170-1
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--ADIPIC ACID, CYCLOHEXANOL, CHEMICAL PRODUCT PRODUCTION, NITRIC
ACID, SUCCINIC ACID
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY FICHE NO----FD70/605012/E06 STEP NO--UR/0064/70/046/003/0170/0171
CIRC ACCESSION NO--AP0140311
UNCLASSIFIED

2/2 013

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0140311

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE CONSUMPTION OF HNO SUB3, DELTA SUBHNO SUB3, IN THE OXIDN. OF CYCLOHEXANOL TO ADIPIIC ACID BY HNO SUB3 DEPENDS ON THE YIELD OF INTERMEDIATES IN THE PROCESS; THE TOTAL CONSUMPTION OF HNO SUB3 FOR THE CONVERSION OF CYCLOHEXANOL TO ADIPTIC, GLUTARIC SUCCINIC AND OXALIC ACIDS MAY BE DETD. FAIRLY ACCURACTELY FROM THE EQUATION: DELTA SUBHNO SUB3 EQUALS 3 MINUS 1.2N SUBCNA WHERE N SUBCNA IS THE YIELD (MOLE-MOLE) OF CARBOXYNITROLIC ACID AND DELTA SUBHNO SUB3 IS IN MOLE-MOLE(MOLE CYCLOHEXANOL). THIS EQUATION IS IN GOOD AGREEMENT WITH DATA FROM THE LITERATURE.

UNCLASSIFIED

1/2 026 UNCLASSIFIED PROCESSING DATE--11SEP70
TITLE--CONDITIONS FOR CARBOXYNITROLIC ACID FORMATION DURING THE NITRIC.
ACID OXIDATION OF CYCLOHEXANOL -U-
AUTHOR--TRUBNIKOVA, V.I., PREOBRAZHEVSKIY, V.A., GOLDMAN, A.M., FURMAN,
M.S., KOSTINA, V.N.
COUNTRY OF INFO--USSR
SOURCE--KHIM. PROM. (MOSCOW) 1970, 46(1), 12-14
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--NITRIC ACID, OXIDATION, CYCLOHEXANOL, CARBOXYL RADICAL,
CHEMICAL REACTION RATE, ACTIVATION ENERGY
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REFEL/FRAME--1985/1453 STEP NO--UR/0064/70/046/001/0012/0014
CIRC ACCESSION NO--AP0101539
UNCLASSIFIED

2/2 022

UNCLASSIFIED

PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0129511

ABSTRACT/EXTRACT--(U) GP-G- ABSTRACT. A PROLONGED PHOSPHORESCENCE OF EUROPIUM CENTERS AFTER THE ELECTROLUMINESCENCE OF SrS-Cu AND Eu PHOSPHORS WAS DISCOVERED. THE PHOSPHORESCENCE SPECTRUM AFTER ELECTROPERTURBATION COINCIDES WITH THE SPECTRUM OF ORDINARY PHOSPHORESCENCE AFTER PHOTOPERTURBATION IN THE REGION OF IMPURITY (λ_{PERT} EQUALS 365 NM) AND FUNDAMENTAL ABSORPTION (λ_{PERT} EQUALS 253 NM). EXTINGUISHING THE PHOSPHORESCENCE IN THE INITIAL STAGES CONSISTS OF TWO COMPONENTS, EXPOTENTIAL AND HYPERBOLIC, WHILE THE LATER STAGES STRICTLY FOLLOW A HYPERBOLIC LAW.

UNCLASSIFIED

1/2 022

UNCLASSIFIED

APPROVED FOR RELEASE: 09/19/2001

CIA-RDP86-00513R002200920019-6"

USSR

UDC 535.367+ 535.377 + 537.226.6

G
GOLDMAN, A. G., PYSHNETY, M. M., Institute of Physics, Academy of Sciences, Ukr. SSR

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USSR

GOLDMAN, A. G., et al, Doklady Akademii Nauk SSSR, Vol 193, No 1, 1 July 1970, pp 65-68

< 100 the logarithmic curves for nonstimulated currents have an approximately linear form: i.e., the current is found to depend, in a degree, on the voltage, and this degree increases with a decrease of temperature. The dependence of $\log I$ of nonstimulated currents on T^{-1} in polycrystalline CdSe is also shown. 2 fig. 1/4 ref. Received by editors, 5 Nov 1969.

2/2

- 70 -

Organophosphorous Compounds

USSR

UDC 541.621'49:546.733'18:86:547.442.2

ABLOV, A. V., BOTSCHANSKIY, M. M., SIMONOV, YU. A., MAIMONOVSKIY, T. I.,
 GOL'DMAN, A. M., and BOLISA, O. A., Institute of Applied Physics, Academy of
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"A New Kind of Stereoisomerism in trans-Dioximinines of Cobalt (III) With
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where X = Cl, Br, or I, and E = P, As or Sb. Furthermore, it was shown that
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1/2 013 UNCLASSIFIED PROCESSING DATE--04DEC70
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COUNTRY OF INFO--USSR

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DATE PUBLISHED-----70

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CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY FICHE NO----FD70/605012/E06 STEP NO--UR/0064/70/046/003/0170/0171

CIRC ACCESSION NO--AP0140311

UNCLASSIFIED

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PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0140311

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE CONSUMPTION OF HNO SUB3, DELTA SUBHNO SUB3, IN THE OXIDN. OF CYCLOHEXANOL TO ADIPIC ACID BY HNO SUB3 DEPENDS ON THE YIELD OF INTERMEDIATES IN THE PROCESS; THE TOTAL CONSUMPTION OF HNO SUB3 FOR THE CONVERSION OF CYCLOHEXANOL TO ADIPTIC, GLUTARIC SUCCINIC AND OXALIC ACIDS MAY BE DETD. FAIRLY ACCURACTELY FROM THE EQUATION: DELTA SUBHNO SUB3 EQUALS 3 MINUS 1.2N SUBCNA WHERE N SUBCNA IS THE YIELD (MOLE-MOLE) OF CARBOXYNITROLIC ACID AND DELTA SUBHNO SUB3 IS IN MOLE-MOLE(MOLE CYCLOHEXANOL). THIS EQUATION IS IN GOOD AGREEMENT WITH DATA FROM THE LITERATURE.

UNCLASSIFIED

1/2 026 UNCLASSIFIED PROCESSING DATE--11SEP70
TITLE--CONDITIONS FOR CARBOXYNITROLIC ACID FORMATION DURING THE NITRIC.
ACID OXIDATION OF CYCLOHEXANOL -U-
AUTHOR--TRUBNIKOVA, V.I., PREOBRAZHENSKIY, V.A., GOLDMAN, A.M., FURMAN,
M.S., KOSTINA, V.N.
COUNTRY OF INFO--USSR
SOURCE--KHIM. PROM. (MOSCOW) 1970, 46(1), 12-14
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--NITRIC ACID, OXIDATION, CYCLOHEXANOL, CARBOXYL RADICAL,
CHEMICAL REACTION RATE, ACTIVATION ENERGY
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REFEL/FRAME--1985/1453 STEP NO--UR/0064/70/046/001/0012/0014
CIRC ACCESSION NO--AP0101539
UNCLASSIFIED

2/2 026

UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0101539

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A CYCLOHEXANOL (I) 57PERCENT HNO
SUB3 MIXT. (MOLE RATIO 1:7) WAS AGITATED (BY BUBBLING N) 1 TO 30 MIN AT
35DEGREES; THE CONCN. OF CARBOXYNITROLIC ACID HO SUB2 C (CH SUB2) SUB4 C
(:NOH) NO SUB2 (II) IN THE MIXT. INCREASED FROM 0.48 M AFTER 1.9 MIN TO
0.685 M AFTER 10.0 MIN, AND DECREASED SLIGHTLY THEREAFTER. THE MAX.
YIELD (60PERCENT) OF II WAS OBTAINED WHEN THE REACTION WAS CARRIED OUT
AT 45 TO 55DEGREES. THE RATE CONST. OF THE REACTION (K) WAS 0.5 MIN
PRIME NEGATIVE1 AT 30DEGREES; LOG K INCREASED LINEARLY FROM NEGATIVE4
TO 3 WHEN THE TEMP. INCREASED FROM 5 TO 55DEGREES; THE ENERGY OF
ACTIVATION WAS 25.4 KCAL. PER MOLE.

UNCLASSIFIED

1/2 029 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--DETERMINING THE MODULUS OF ELASTICITY OF EPOXY POLYMERS IN THE
INITIAL STAGES OF HARNENING -U-
AUTHOR--(02)-CLKHOVIK, O.YE., GOLDMAN, A.YA.
CCUNTRY OF INFO--USSR
SOURCE--MEKH. POLIM. 1970, 6(1), 163-5
DATE PUBLISHED--70
SUBJECT AREAS--MATERIALS
TOPIC TAGS--ELASTIC MODULUS, EPOXY RESIN, POLYETHYLENE, POLYAMINE, ORGANIC
PHOSPHATE, PHTHALATE, TEMPERATURE DEPENDENCE, HARDNESS/(U)ED5 EPOXY
RESIN
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1989/0816 STEP NO--UR/0374/70/006/001/0163/0165
CIRC ACCESSION NO--AP0107358
UNCLASSIFIED

2/2 029

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0107358

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. FOUR EPOXY RESIN COMPNS. (I): ED-5 100, MGF-9 20, POLYETHYLENE POLYAMINE (III) 12, AND MARSHALIT (III) 50; ED-5 100, TRICRESYL PHOSPHATE 20, II 14, AND III 50; ED-5 100, DI-BU PHTHALATE 20, III 12, AND III 50; AND ED-5 100, MGF-9 20, AND III 12 PARTS BY WT. WERE TESTED TO DET. THE TEMP.-TIME DEPENDENCE OF THE ELASTIC MODULUS AT THE ONSET OF HARDENING. PLOTS OF SHRINKAGE VS-ELASTIC MODULUS AND ELASTIC MODULUS VS. HARDENING TIME SUGGESTED THAT THE ELASTIC MODULUS AT A TIME τ COULD BE EXPRESSED IN TERMS OF AN EMPIRICAL EQUATION, $E_{\tau} = E_0 (1 - \alpha \tau)^{\beta}$, WHERE α SUBO AND α ARE COEFFS. RANGING FROM 3.7 TIMES 10^3 TO 7.3 TIMES 10^3 MN MAGNITUDE OF M PRIME² AND 0.022-0.035 G PRIME² NEGATIVE¹, RESP. THUS, THE DEGREE OF HARDENING (SHRINKAGE) CAN BE DETD. FROM E_{τ} SUB τ . FACILITY: TEKHNOL. INST. KHOLOD. PROM., LENINGRAD, USSR.

UNCLASSIFIED

1/2 050 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--FEATURES OF CRACK FORMATION IN SINGLE LAYER SHEETS FROM GLASS
FABRIC REINFORCED PLASTICS -U-
AUTHOR-(02)-GOLDMAN, A.YA., SAVELYEVA, N.F.

COUNTRY OF INFO--USSR

SOURCE--MEKH. POLIM. 1970, 6(1), 178

DATE PUBLISHED--70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--PLASTIC DEFORMATION, GLASS FIBER, REINFORCED PLASTIC, CRACK
PROPAGATION, PHOTOGRAPHY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRA--2000/0802

STEP NO--UR/0374/70/006/001/0178/0178

CIRC ACCESSION NO--AP0124471

UNCLASSIFIED

2/2 050

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0124471

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DEFORMATION AND CRACKING IN GLASS FIBER REINFORCED PLASTICS (I) WERE STUDIED BY POLARIZED LIGHT UNIT PHOTOGRAPHY. CRACKS WERE FORMED AT THE TRANSVERSE AND LONGITUDINAL YARN CONTACT POINTS. THE BEHAVIOR OF STRAINED I DEPENDED ON THE REINFORCEMENT, E.G., INFLECTION POINTS ON THE STRESS STRAIN DIAGRAMS WERE DUE TO AGGREGATE CRACKS ALONG THE WEFT. SECONDARY TINY CRACKS WERE OBSD. BETWEEN FIBERS DUE TO A "RELEASED" TRANSVERSE YARN.

UNCLASSIFIED

1/2 048 UNCLASSIFIED PROCESSING DATE--02OCT70
TITLE--FAILURE OF RIGID POLYMER BINDERS DURING ELONGATION -U-

AUTHOR--(02)-GOLDMAN, A.YA., TRIZNO, M.S.

COUNTRY OF INFO--USSR

SOURCE--MEKH. POLIM. 1970. 6(1), 177-8

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY, MATERIALS

TOPIC TAGS--POLYMER BINDER, ELONGATION, POLYMER DEGRADATION, EPOXY RESIN,
POLYESTER RESIN, GLASS FIBER, REINFORCED PLASTIC, DEFORMATION RATE,
MECHANICAL STRESS, ELASTICITY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1989/0809

STEP NO--UR/0374/70/006/001/0177/0178

CIRC ACCESSION NO--AP0107351

UNCLASSIFIED

2/2 048

UNCLASSIFIED

PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0107351

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE MACROSCOPIC DEGRADATION OF A NO. OF RIGID EPOXY RESINS (I) AND POLYESTERS (II) (USED AS BINDERS FOR GLASS FIBER REINFORCED PLASTICS) WAS STUDIED DURING ELONGATION AT A CONST. DEFORMATION RATE. THE DEGRADATION OF I AND II SAMPLES DEPENDED ON THE DEFORMATION RATE. THE DATA OBTAINED CONFIRMED THE EXISTENCE OF 2 MARKEDLY DIFFERENT DEGRADATION PATTERNS. THE ELASTIC, STRENGTH, AND STRAIN PROPERTIES OF I AND II WERE DETD. THE DEGRADATION CAUSING STRESS CAN BE APPROX. EVALUATED AS A FUNCTION OF THE DEFORMATION RATE FROM THE GENERALIZED MAXWELL EQUATION.

UNCLASSIFIED

1/2 033 UNCLASSIFIED PROCESSING DATE--02OCT70
TITLE--PHYSICOCHEMICAL PROCESSES IN A METAL POLYMER FRICTION PAIR -U-

AUTHOR--(02)-KUTKOV, A.A., GOLDMAN, I.M. 6

COUNTRY OF INFO--USSR

SOURCE--MEKH. POLIM. 1970, 6(1), 176-7

DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS, CHEMISTRY

TOPIC TAGS--PEROXIDE, FRICTION, POLYAMIDE RESIN, STEEL, CHEMICAL REACTION
MECHANISM, CAPRONE, CAPROLACTAM, CHEMICAL ANALYSIS, POLYMER DEGRADATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAE--1989/0810

STEP NO--UR/0374/70/006/001/0176/0177

CIRC ACCESSION NO--AP0107352

UNCLASSIFIED

2/2 033

UNCLASSIFIED

PROCESSING DATE--02DCT70

CIRC ACCESSION NO--AP0107352

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A PROCEDURE WAS PROPOSED FOR THE
IDODOMETRIC DETN. OF PEROXIDES FORMED DURING THE FRICTION OF POLYAMIDES
(I) AGAINST STEEL. THE DEGREE OF DEGRADATION AND THE AMT. OF PEROXIDES
FORMED WERE PROPORTIONAL TO THE STRESS APPLIED ON THE FRICTION PAIR.
THE REACTION MECHANISM OF STEEL WITH THE DEGRADATION PRODUCTS OF I WAS
STUDIED BY EVALUATING THE POLARIZATION CURVES TAKEN IN H SUB2 SO SUB4
SOLNS. CONTG. KAPRON AND CAPROLACTAM AND IN AQ. H SUB2 O SUB2 SOLNS.
CONTG. EPSILON CAPROLACTAM.

UNCLASSIFIED

USSR

UDC 621.791.93:669.017,1:620.168.3

BYSTROV, V. A., Engineer; BYSTROV, A. V., Candidates of Technical Sciences, Dneprodzerzhinskiy Industrial Institute imeni M. I. Arsenichev; BURKSER, L. D., Engineer, and GOL'DMAN, L. D., Engineer, Dneprovskiy Metallurgical Plant imeni F. E. Dzerzhinskiy

"Electroslag Surfacing of Composites"

Moscow, Svarochnoye Proizvodstvo, No 2, Feb 74, pp 14-15

Abstract: Results are presented from attempts to develop an electroslag surfacing method which would make it possible to increase the wear resistance of the surfaced metal by adding cast carbides and protecting them from dissolution, i.e., to produce a composite alloy by electroslag surfacing. The scheme of the device used for electroslag surfacing is illustrated and data are given on the microhardness of the surfacing metal and base metal after surfacing (1900-2600 and 580-760 kgf/mm², respectively. No mention is made of the materials used for the base metal and surfacing metal materials, but it was stated that, from wear tests (gas-abrasive wear), a composite alloy had been produced. Four figures, four bibliographic references.

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USSR

UDC 669.71.053.4

NI, L. P., ~~GOL'DMAN, M. M.~~ SOLENKO, T. B., BUNCHUK, L. V., KHALYAPINA, O. B.

"Oxides of Iron in the Production of Alumina"

Okisly Zheleza v Proizvodstve Glinozema [English Version Above], Alma-Ata, Nauka Press, 1971, 136 pages. (Translated from Referativnyy Zhurnal Metallurgiya, No 3, 1972, Abstract No 3G123K from the resume).

Translation: Literature and experimental data are presented on the investigation of systems including the oxides of Fe, Na, Al, Si and Ca, under hydrothermal conditions. The behavior of the oxides of Fe in hydrochemical processes of alumina production is described in detail. The production methods, composition, and structure of compounds containing Fe are presented. Particular attention is given to the chemical compounds synthesized. 43 figs; 29 tables; 392 biblio refs.

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UNCLASSIFIED

PROCESSING DATE--17JUL70

TITLE--ADRENALIN, NORADRENALIN AND THEIR PREDECESSOR EXCRETION (DOPA AND
DOPAMIN) IN PATIENTS WITH MIGRAINE -U-
AUTHOR--GOLDMAN, N.B., MATLINA, E.SH., FETS, A.N. G

COUNTRY OF INFO--USSR

SOURCE--ZHURNAL NEVROLOGII I PSIKHIATRII, 1970, VOL 70, NR 2, PP
199-203

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--HEADACHE, ADRENALINE, NORADRENALINE, URINE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1979/0670

STEP NC--UR/0246/70/070/002/0199/0203

CIRC ACCESSION NO--AP0047175

UNCLASSIFIED

18
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23

Acc. Nr: **AP0047175**

Ref. Code: UR 0246

PRIMARY SOURCE: Zhurnal Nevropatologii i Psikiatrii, 1970,
Vol 70, Nr 2, pp 189-203

ADRENALIN, NORADRENALIN AND THEIR PREDECESSOR
EXCRETION (DOPA AND DOPAMIN) IN PATIENTS WITH MIGRAINE

N. B. Goldman, E. S. Mattina and A. N. Fets

The authors conducted an investigation of 25 patients with migraine, where they studied the diurnal urine excretion (as well as in partial excretion of urine) of adrenaline, noradrenalin, dopamin and dopa in the intercrises period, during crises, as well as during the introduction of insulin. It was possible to show that in the intercrises period the excretion of these substances did not disclose significant differences compared to normals. It was demonstrated that there was only a decrease in the noradrenalin—adrenalin excretion ratio. In the period prior to a crisis there was a decrease in adrenalin excretion. In the crucial period of the crisis adrenalin excretion rose significantly. In those cases where during the introduction of insulin a migrainous attack ensued there was an increased adrenalin excretion which exceeded the changes seen in normals. The achieved results give grounds to assume that the changed adrenalin content plays a certain role in the development of a migrainous attack.

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USSR

UDC 577.4

GOL'DMAN, R. S.

"One Approach to Diagnosis of Combinational Circuits"

Izv. Leningr. elektrotekhn. in-ta (Bulletin of Leningrad Electrical Engineering Institute), 1972, vyp. 118, part 1, pp 129-133 (from RZh-Matematika, No 3, Mar 73, Abstract No 3V446 by KH. MADATYAN)

Translation: An algorithm is presented for construction of complete diagnostic tests for combinational circuits. In the process of test construction an analysis is made of groups of single faults, and significant faults are found.

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USSR

GOL'DMAN, R. S.

"One Approach to the Diagnosis of Combination Systems"

Izv. Leningr. Elektrotekhn. In-ta. [Works of Leningrad Institute of Electric Engineering], 1972, No 118, Part 1, pp 129-133 (Translated from Referativnyy Zhurnal, Kibernetika, No 3, Moscow, 1973, Abstract No 3 V446 by Kh. Madatyan).

Translation: An algorithm is presented for construction of full diagnostic tests for combination systems. In the process of construction of the tests, groups of individual defects are analyzed and the significant defects are determined.

1/1

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USSR

UDC: 577.4

GOL'DMAN, R. S.

"Concerning One Approach to Troubleshooting Combinational Circuitry"

V sb. Vychisl. sistemy (Computer Systems--collection of works),
vyp. 47, Novosibirsk, 1971, pp 103-116 (from RZh-Kibernetika,
No 8, Aug 72, Abstract No 8V470)

[No abstract]

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USSR

KOVAL'NOROV, A. F., GOLDOBEEV, B. I.

"The Analogy Factor in a Tube with Local Twisting of the Flow by Blade Vortexers"

Tr. Kazan. Aviats. In-ta, [Works of Kazan Aviation Institute], 1971, Vol 133, pp 37-41. (Translated from Referativnyy Zhurnal Mekhanika, No 1, 1972, Abstract No 1B864, by the authors).

Translation: The problem is studied of the correctness of the Reynolds analogy in a twisted flow of fluid in a channel. Experimental studies of heat emission and hydraulic resistance in the tube are performed with blade vortexers with various twisting angles at the entrance to the tube. The results of the studies show that the hydrodynamic theory of heat exchange gives artificially high results in comparison to the experimental values of heat transfer coefficients throughout the range of Reynolds numbers studied. 5 biblio refs.

1/1

1/2 027 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--METHODS OF PROGRAMMATIC IRRADIATION OF MALIGNANT TUMORS IN MOBILE
TECHNIQUES OF TELEGAMMETHERAPY -U-
AUTHOR-(04)-YERMAKOV, V.I., VIDENSKIY, V.G., MARDYNSKIY, YU.S.,
GOLDOBENKO, G.V.
COUNTRY OF INFO--USSR
SOURCE--MEDITSINSKAYA RADIOLOGIYA, 1970, VOL 15, NR 5, PP 77-80
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--GAMMA IRRADIATION, RADIATION BIOLOGIC EFFECT, TUMOR, MEDICAL
APPARATUS
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1997/1961 STEP NO--UR/0241/70/015/005/0077/0030
CIRC ACCESSION NO--AP0120604
UNCLASSIFIED

2/2 027

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0120604

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE POSSIBLE WAYS OF OPTIMIZATION OF CONDITIONS OF IRRADIATION OF MALIGNANT TUMORS WITH MOBILE TECHNIQUES OF TELEGAMMATHERAPY INVOLVING THE USE OF A TRACING SYSTEM ARE DISCUSSED. THE ELABORATION OF SUCH A SYSTEM IS BASED ON THE USE OF THE EFFECT OF SEPARATE PARAMETERS (ROTATION, SOURCE RATE, SOURCE FOCUS DISTANCE, DIMENSIONS OF THE AXIAL FIELD) ON THE FORMATION OF THE DOSE FIELD. IT IS EXPECTED THAT SUCH A SYSTEM WOULD MAKE IT POSSIBLE TO ACHIEVE AN OPTIMAL RATIO BETWEEN THE DOSE IN THE TUMOR AND THE DOSE OF WHOLEBODY IRRADIATION OF THE PATIENT. FACILITY: INSTITUT MEDITSINSKOY RADIOLOGII AMN SSSR.

UNCLASSIFIED

USSR

UDC 536.24

SHCHUKIN, V. K., IDIATULLIN, N. S., ~~GOLDOBEYEV, V. I.~~ and KIRSANOV, YU. A.

"Investigation of Heat Transfer With Flow Through Wire-Mesh"

Kazan', Tr. Kazan. Aviats. In-ta (Works of Kazan' Aviation Institute), No 133, 1971, pp 62-71 (from Referativnyy Zhurnal-Aviatsionnyye i Raketye Dvigateli, No 2, Feb 72, Abstract No 2.34.116)

Translation: The results of the practical application of the gradient method to the investigation of heat transfer near a porous wall are presented. Direct measurements of the temperature distribution through the thickness of the wall made out of wire mesh serve as a basis for determining the heat flux to the surface of the wall and the heat transfer coefficient with the flow of gas through the wall. The wire mesh package and the test setup are described. The results of tests for flow without vortex agree with known data. Some new experimental data on heat transfer with vortex gas flow have been obtained. 6 illustrations. 12 references.

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USSR

UDC: 621.375.62

GOLDOBIN, A. S. and LIFASOV, A. I.

"Some Applications of Lasers in the Study of the Electrical Stability of Solid Dielectrics"

Tomsk, V sb. Tekhn. vysokikh napryazh. (High-Voltage Techniques-- collection of works) Tomsk University, 1973, pp 110-111 (from Rzh-- Fizika, No 7, 1973, Abstract No 7D1037)

Translation: The authors explain the methods and examine the results of an investigation into the electrical stability of solid dielectrics by photographic means. To illuminate the specimens, a ruby laser operating in the monopulse mode (50 MW of power, duration of 30-50 ns) and in free oscillation (energy of 10 , duration of 800 μ s) is synchronous with a source of high-voltage pulses. The processes of electrical breakdown were recorded with the KP-7 microscope and a fast photographic recorder SFR-11. The high resolving power and sharpness of photomicrographs obtained by the use of a laser as an illumination source as compared to ordinary light sources were noted. The need is demonstrated for studying the effect of laser radiation on electrical puncturing of a dielectric. The prospects of using holographic methods for studying the electrical stability of dielectrics are also noted. Bibliography of three. K. G. I.
1/1

USSR

UDC: 621.315.592

GOLDOBIN, I. I., DOBAIN, A. S., KURNOSOV, V. D., LAPITSKAYA, G. A.,
PEESHKOV, A. A., PROZOROV, O. N., RIVLIN, L. A., SOLODKOV, A. F.,
and SHIL'DYAYEV, V. S.

"Quantum-Optical Integrated Circuits of GaAs"

Leningrad, fizika i tekhnika poluprovodnikov, Vol. 5, No. 1, 1971,
pp 170-172

Abstract: This brief communication offers compact information on quantum-optical logic circuits using integrated GaAs components, based on the stability of multi-coupled semiconductor lasers. Photographs of such laser modules are shown; these have electron-hole junctions formed by the diffusion method, and are made in the form of mesa structures consisting of injector sections with etched dividers 50 microns wide and about 5 microns deep, which isolate regions of nonuniform injection with a transfer resistance of about 15 ohms. The modules contain photoelectric converters, in the form of GaAs photodiodes, which transform optical pulses into electrical pulses with amplitudes of the order of 0.5 volts across a load of 50 ohms. Action of the modules is explained. The author expresses his gratitude to M. P. Stel'makh.

1/2 014
TITLE--POLYURETHANES -U-

UNCLASSIFIED

PROCESSING DATE--30OCT70

AUTHOR--(04)--MARCHENKO, G.N., GOLDOBIN, S.F., GORBUNOVA, N.N., CHELYSHEV,
A.A.
CCOUNTRY OF INFO--USSR

SOURCE--USSR 264,688

REFERENCE--GTKRYTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI 1970,
DATE PUBLISHED--03MAR70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--POLYURETHANE RESIN, CHEMICAL PATENT, ORGANOMERCURY COMPOUND,
CATALYST, ORGANIC SYNTHESIS, ORGANIC ISOCYANATE

CCNTRCL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3002/1467

STEP NO--UR/0482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0128866

UNCLASSIFIED

2/2 014

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AA0128866

ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. POLYURETHANES ARE PREPD. BY
REACTING HYDROXY CONTG. COMPS. AND POLYISOCYANATES IN THE PRESENCE OF
ORGANOMETALLIC CATALYSTS. CATALYSTS USED ARE ALKYL OR ARYL MERCURY
DERIVS. OF INORG. OR CARBOXYLIC ACIDS, RHGX OR RHGO SUB2 OR PRIME1,
WHERE R IS A HYDROCARBON GROUP, X IS HALOGEN, AND R PRIME1 IS A
CARBOXYLIC ACID RESIDUE CONTG. 1-18 C ATOMS.

UNCLASSIFIED

6 Radar

USSR

UDC: 621.396.961

KAGAN, V. G., MUSHAT, T. S., GOLDOBIN, V. I.

"Informational Evaluation of Radiotechnical Systems in Accounting for Probabilistic Characteristics"

Tr. Novosib. elektrotekhn. in-ta (Works of the Novosibirsk Electrical Engineering Institute), 1970, vyp. 2., kn. 1, pp 48-57 (from RZh-Radiotekhnika, No 6, Jun 70, Abstract No 6G8)

Translation: The authors introduce the concept of informativeness for evaluating the correspondence between the assumed and true coordinates of the target in a radar detection and tracking system. An informativeness formula is given in terms of the probability of detecting a signal against a background of noise, the probability of a false alarm, the probability of determining the target range with a given accuracy, and the probability of determining the angular coordinates with a given accuracy. In view of the complexity of the resultant expressions, simplifications must be made with the use of approximations or an appropriate computational algorithm. Bibliography of four titles. A. M.

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USSR

UDC 669.2:541.18

LASKORIN, B. N., GOLDOBINA, V. A., and KOPANEV, A. M.

"Sorption of Nonferrous Metal and Iron Ions by Inorganic Titanium-Base Ion-Exchange Resins"

Moscow, Tsvetnyye Metally, No 1, Jan 73, pp 22-24

Abstract: Results are reported on studies of the sorption of several non-ferrous metal and iron ions by titanium phosphate Ti-P and a hydrated titanium dioxide Ti-OH. Tests were conducted under static conditions at $20 \pm 2^\circ\text{C}$, and the ratio of ion-exchange resin (g) to solution (ml) was 1:500. Contact time (24 hours) was adequate for establishing equilibrium. Sorption of all the investigated metals on the sorbents Ti-P and Ti-OH from sulfate solutions at low pH values, with the exception of trivalent iron cations, were insignificant, but sorption grew with increased solution pH and was especially sharp for Cu^{2+} and Zn^{2+} . The maximum capacity for cations Fe^{3+} , Cu^{2+} , Zn^{2+} , Co^{2+} , and Ni^{2+} during sorption from sulfate solutions was achieved at pH values of the solutions close to the pH at the start of precipitation of the corresponding hydroxides. It was found that the sorptability series of elements in sulfate solutions was the same as for Ti-P and Ti-OH and almost coincident with the solubility series of the hydrates of these same elements (in the order of increasing solubility). 3 figures.

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USSR

UDC 615.214.065:617.7:617.7-02:615.214

GOL'DOVSKAYA, I. L., Candidate of Medical Science, Institute of Psychiatry,
Academy of Medical Sciences USSR, Moscow

"Eye Complications Induced by Psychotropic Compounds"

Moscow, Vestnik Oftal'mologii, No 6, Nov/Dec 70, pp 54-57

Abstract: Drugs used in the treatment of patients with various psychoses (e.g., schizophrenia, manic-depressive psychoses, and vascular diseases of the cerebrum with psychotic manifestations) were studied to determine their effect on the eyes. The ophthalmologic examinations, administered included ophthalmoscopy and a study of all of the visual functions. The drugs used were divided into four groups. The first group included aminazin. The drug was given to patients in doses of 300-900 mg per 24 hours for various periods of time. No lesions of the retina or optic nerve were found, although pigmentation of cornea and crystalline lens developed. The second group included thioridazine (mellaril). In therapeutic doses of 400 mg per 24 hours, it produced no side effects on the eyes. In doses of 800 mg or over retinopathy developed. The third group included iprazid, niamid, and other antidepressants. Their use is contraindicated. The fourth group comprised amitriptyline derivative and other antidepressants. No serious side effects on the eyes were noted with these drugs, although two

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USSR

GOL'DOVSKAYA, I. L., Vestnik Oftal'mologii, No 6, Nov/Dec 70, pp 54-57

cases of vascular spasm in the visual pathway were observed. Case histories are presented of two patients treated with amitriptyline derivatives, one with depression due to circulatory disorders and the other with depression on a background of hypertension. The need is stressed for further study of complications associated with psychopharmacological preparations.

2/2

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1/2 035 UNCLASSIFIED PROCESSING DATE--09OCT70
TITLE--OPHTHALMOLOGICAL STUDIES OF PATIENTS RECEIVING PSYCHOTROPIC
PREPARATIONS -U-
AUTHOR--GOLDOVSKAYA, I.L.

COUNTRY OF INFO--USSR

SOURCE--ZHURNAL NEVRUPATOLOGII I PSIKHIATRII IMENI S. S. KORSKOVA, 1970,
VOL 70, NK 5, PP 759-762
DATE PUBLISHED--70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--PSYCHOPHARMACOLOGY, DRUG EFFECT, OPTHALMOLOGY, VISUAL DEFECT,
BIOLOGIC PIGMENT, VISUAL ACUITY, COLOK PERCEPTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1994/1129

STEP NO--UR/0246/70/070/005/0759/0762

CIRC ACCESSION NO--AP0115148

UNCLASSIFIED

2/2 035

UNCLASSIFIED

PROCESSING DATE--090CT70

CIRC ACCESSION NO--AP0115148

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE AUTHOR CONVENED AN OPHTHALMOLOGICAL STUDY OF 3000 PATIENTS RECEIVING DIFFERENT PSYCHOTROPIC PREPARATIONS. COMPLICATIONS OF THE VISUAL ORGANS WERE SEEN IN ONLY 7 PATIENTS (0.23PERCENT). IN 1 CASE THERE WAS AN AMINAZINE PIGMENTATION OF THE LENS WHICH DID NOT, HOWEVER, AFFECT THE VISUAL FUNCTION. ONE PATIENT DURING AMINAZINE TREATMENT DISPLAYED A DIMNESS IN THE ANTERIOR CAPSULE OF THE LENS (ON THE BASIS OF UVEITIS ENCOUNTERED IN THE PAST). DURING TREATMENT WITH ANTIDEPRESSIVE DRUGS, 3 PATIENTS RECEIVING MAO INHIBITORS HAD A CHANGED COLOUR PERCEPTION AND A TEMPORAL HEMIOPHIA TO GREEN COLOURS (1 CASE). THERE WAS ALSO A CONCENTRIC NARROWNESS OF THE VISUAL FIELD TO RED AND GREEN COLOURS (2 CASES). IN 2 PATIENTS TREATED BY AMYTRIPTILINE THERE WAS AN ACUTE DISORDER OF SIGHT (A DECREASE IN THE ACUITY OF SIGHT, A NARROWNESS OF THE VISUAL FIELD, ETC.), RELATED TO A VASCULAR SPASM OF THE VISUAL TRACT. THE AUTHOR UNDERLINES THE PRACTICAL SIGNIFICANCE OF COMPLICATIONS BROUGHT ON BY ANTIDEPRESSIVE DRUGS. ALL COMPLICATIONS IN EARLY DETECTION AND TREATMENT ARE REVERSIBLE. ALL PATIENTS RECEIVING PSYCHOTROPIC PREPARATIONS SHOULD HAVE A REGULAR OPHTHALMOLOGICAL CHECK UP. FACILITY: INSTITUT PSIKHIATRII AMN SSSR, MOSCOW.

UNCLASSIFIED

USSR

UDC: 536.46

GOL'DSHLEGER, U. I., BARZYKIN, V. V., MERZHANOV, A. G., Moscow

"Mechanism and Regularities of Ignition of Condensed Systems By a Disperse Flow"

Novosibirsk, Fizika Goreniya i Vzryva, No 3, 1971, pp 319-332

Abstract: This work is dedicated to investigation of the process of ignition of condensed substances under complex heat exchange conditions - ignition of the substance by a disperse flow (gas-solid particles). New experimental data are used and quantitative processing of the regularities established is performed on the basis of the simplest model of solid phase ignition. The process of ignition of nitrocellulose, polyvinyl nitrate and other explosives by a disperse stream is studied. The characteristics of the stream and softening point of the substances are found to influence the nature of the process significantly. An approximate theoretical model of the process is suggested. The results of numerical analysis based on this model agree well with experimental data.

1/1

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1/2 046 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--IGNITION OF CONDENSED SUBSTANCES BY A DISPERSED FLOW -U-
AUTHOR-(03)-BARZYKIN, V.V., GOLDSHLEGER, U.I., MERZHANOV, A.G.
COUNTRY OF INFO--USSR
SOURCE--DOKL. AKAD. NAUK SSSR 1970, 191(1), 111-14
DATE PUBLISHED-----70
SUBJECT AREAS--ORDNANCE, PROPULSION AND FUELS
TOPIC TAGS--NITROCELLULOSE, IGNITION LAG, POROSITY, EXPLOSIVE, HEAT
TRANSFER RATE, POLYVINYL NITRATE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3001/2128 STEP NO--UR/0020/70/191/001/0111/0114
CIRC ACCESSION NO--AT0127497
UNCLASSIFIED

2/2 046

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AT0127497

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. NITROCELLULOSE OR POLY (VINYL NITRATE) TABLETS WERE INJECTED INTO A STREAM OF AIR, MOVING AT 1-3 M-SEC AND CARRYING ALUMINOSILICATE (I) PARTICLES 60-300 MU IN DIAM. THE TIME (T) REQUIRED BY THESE EXPLOSIVES TO IGNITE WAS DETD. THE TEMP. OF THE GAS SOLID STREAM VARIED FROM 250 TO 650DEGREES. THE CHANGES IN T DEPENDED ON THE HEAT TRANSFER RATES BETWEEN THE EXPLOSIVES AND THE STREAM. THIS IN TURN DEPENDED ON THE SURFACE POROSITY AND SOFTNESS OF THE EXPLOSIVES WHICH COULD CAPTURE I PARTICLES AND THUS INCREASE THE HEAT TRANSFER RATE.

FACILITY: INST. KHIM. FIZ., MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC 621.382.002

GOL'DSHMIDT, I.A.

"Improvement Of Technology And Automation Of Dimensional Inspection On The Basis Of A Classification Of The Elements Of Electronic Industry Products"

Elektron. tekhnika. Nauchno-tekhn.sb. Upr.kachestvom i standartiz (Electronic Technology. Scientific-Technical Collection. Quality Control And Standardization), 1970, Issue 2, pp 3-12 (from RZh--Elektronika i yeye primeneniye, No 4, April 1971, Abstract No 4B411)

Translation: The results are presented of an analysis of the requirements on the size, tolerances, outside diameter, and geometrical form of the elements of electronic technology products. An overall classification of the elements of electronic devices is proposed and an account is given of the principles of its construction. The necessity is shown for creation on the basis of the proposed classification of the basic designs of automatic and semiautomatic machines for inspection. 1 ref. Summary.

1/1

USSR

UDC 620.17

GOL'DSHMIDT, M. G., KALABUKOV, N. I.

"Device for High-Speed Testing of Materials"

Dokl. IV Nauch.-tekhn. konf. Tekhn. progress v mashinostr. (Report of the 4th Scientific and Technical Conference. Technical Progress in Machine Building), Tomsk, 1972, pp 173-175 (from RZh--Mekhanika, No 6, Jun 73, Abstract No 6V1184)

Translation: A description is presented of the schematic and the operation of a device for high-speed compressive testing of materials. The device makes it possible to record the process in the given stages of deformation using Liesegang rings of different thickness. The effect of the device is based on the fact that the striker of the moving element of the unit is held during the operating process by a sunk key which is sheared when the given degree of deformation is reached. The deformation rate remains constant in practice for corresponding selection of the key parameters. The schematic of the device can be used to build a unit for not only compressive testing but also tensile testing.

1/1

- 142 -

L/2 041 UNCLASSIFIED PROCESSING DATE--090CT70
TITLE--THERMOGRAPHIC STUDY IN THE DIAGNOSIS OF SOME INJURIES AND DISEASES
OF THE WEIGHTBEARING LOCOMOTOR APPARATUR -U-
AUTHOR--(02)-GOLDSHTEYN, A.B., VYKHOVSKAYA, A.G.

COUNTRY OF INFO--USSR

SOURCE--ORTOPEDIYA, TRAVMATOLOGIYA I PROTEZIROVANIYE, 1970, NR 3, PP 46-49

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--THERMOGRAPHIC ANALYSIS, MAN, SKIN EFFECT, IR RADIATION,
MUSCULOSKELETAL DISEASE, INJURY, DIAGNOSTIC METHODS/(U)TEPLOVISOR IR
RADIOMETER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1983/1430

STEP NO--UR/9115/70/000/003/0046/0049

CIRC ACCESSION NO--AP0054292

UNCLASSIFIED

2/2 041

UNCLASSIFIED

PROCESSING DATE--0900170

CIRC ACCESSION NO--AP0054292

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PRINCIPLE OF THERMOGRAPHY IS BASED ON DISTANCE, NON CONTACTING DETERMINATION OF TEMPERATURE OF THE SKIN AND UNDERLYING TISSUES. WITH AID OF HOME INFRA RED SCANNING RADIOMETER "TEPLOVISOR", A SERIES OF 112 PATIENTS WITH INJURIES AND DISEASES OF THE WEIGHTBEARING LOCOMOTOR APPARATUS HAVE BEEN INVESTIGATED. A MARKED EXCESS OF SKIN TEMPERATURE (INFRARED RADIATION) WAS NOTED OVER THE INJURED PORTION OF THE TRUNK OR EXTREMITY IN COMPARISON WITH THE NORMAL SYMMETRIC ONES. THESE FINDINGS ARE INDICATIVE OF THE DIAGNOSTIC EFFICIENCY OF THERMOGRAPHY. THE DISTINCTIVE FEATURES OF THE NEW METHOD ARE ITS VISUALIZABILITY AND OBJECTIVITY WHICH ARE AN EVIDENCE OF ITS PRACTICAL VALUE. THE ADVANTAGE OF THERMOGRAPHY IS THE POSSIBILITY OF IMMEDIATE INFORMATION, MULTIPLE APPLICATION, COMPLETE SECURITY OF INVESTIGATION. AT THE SAME TIME, THE THERMOGRAPHIC STUDY REQUIRES AN OBLIGATORY CLINICORJENTGENOGRAPHIC CONFIRMATION.

UNCLASSIFIED

Acc. Nr: **GOLDSHTEYN** **A.Yu** Ref. Code:

AAO108686 Abstracting Service: **UR 0482**

Soviet Inventions Illustrated, Section III Mechanical and General,

Derwent, 3/10²⁴³⁶⁴⁶ ROAD SPREADER VEHICLE has its one bin wall hinged to the lifter linkage and fitted with

a bladed spreader screw. The metering rotor (11) is fitted with an inside shaft (14) carrying disbalancers (15). To spread coverings on road surfaces etc., the vehicle is placed on the road and a gate opened enough to allow the requisite amount of gravel or rubble out. The vehicle is started and with it the rotor and its disbalancer shaft, and finally the spreader screw. To fill the bin, the wall is simply lowered horizontal, turning round the hinge. The screw evenly spreads the gravel along the shaft. In work, the rotor turns so that its speed vector coincides at its zenith with the direction the vehicle is moving. The gravel is sprinkled out between the gate and rotor blading. The shaft and disbalancers vibrates the rotor to ease friction loading and ensure that the gravel does not stick. Bearings (9) are connected to the frame through shock absorbers (10) to prevent vibrations reaching the vehicle body. Jacks raise or lower the wheels, rotation being passed from the track rollers through connecting shafts to the extensible wheels.

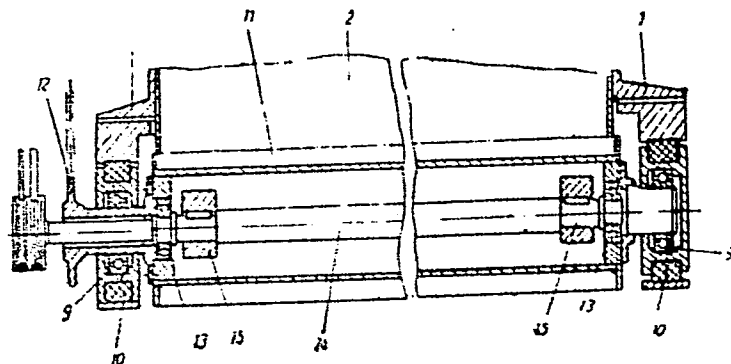
1/3

18
OK

REEL/FAME

19900402

AA0108686



22.3.68 as 1228371/29-14 LERMAN, A.P. et al. Ministry
of Transport Construction Design Office USSR (29.9.69)
Bul. 17/14.5.69. Class 19c, Int. Cl. E Olc.

19900403

AA0108686

AUTHORS: Lerman, A. P.; Syrkin, Yu. N.; Gol'dshteyn, A. Yu.;
Veytsman, M. I.

Proyektno-Konstruktorskoye Byuro Glavstroymekhanizatsii
Ministerstva Transportnogo Stroitel'stva SSSR

3/3

19900404

1/2 013 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--PRODUCTION OF OILS BY HYDROCRACKING A VACUUM DISTILLATE OF
ARLANSKII PETROLEUM -U-
AUTHOR--(05)--LIPOVSKAYA, K.S., GOLDSHTEYN, D.L., ROGOV, S.P., PEREZHIGINA,
I.YA., AGAFONOV, A.V.
COUNTRY OF INFO--USSR
SOURCE--NEFTEPERERAB. NEFTEKHIM. (MOSCOW) 1970, (5), 45
DATE PUBLISHED-----70
SUBJECT AREAS--MATERIALS, EARTH SCIENCES AND OCEANOGRAPHY
TOPIC TAGS--LUBRICATING OIL, PETROLEUM HYDROCRACKING, PETROLEUM DEPOSIT,
CHEMICAL COMPOSITION, PETROLEUM DEWAXING, VACUUM DISTILLATION
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3005/1961 STEP NO--UR/0318/70/000/005/0045/0045
CIRC ACCESSION NO--AP0133805
UNCLASSIFIED

2/2 013

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0133805

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE TITLE DISTILLATE, HIGH IN S AND BITUMINOUS ASPHALTIC COMPOS., WAS HYDROCRACKED IN 1 STEP AT 100 ATM, 425DEGREES, AND 1 L. STOCK-L. CATALYST-HR, YIELDING A HEAVY FRACTION B. LARGER THAN 350DEGREES, WITH S 0.06, N 0.03, AND COKE 0.1PERCENT, WHICH WAS VACUUM DISTO. TO OBTAIN FRACTIONS WHICH WERE DEWAXED AND HYDROFINED TO YIELD LOW VISCOSITY AND AUTOMOBILE OILS. THE LATTER HAD VISCOSITY INDEX 100 AND 0.03PERCENT S.

UNCLASSIFIED

Acc. Nr: **AP0044021**

Ref. Code: UR 0240

PRIMARY SOURCE: Gigiyena i Sanitariya, 1970, Nr 2, pp 45-48

PRINCIPLES UNDERLYING HYGIENIC EVALUATION
OF SURFACE DEACTIVATION METHODS

Gorodinskiy, S. M.; Goldshteyn, D. S.; Fadeyev, P. Ye.

Hygienic evaluation of methods employed in surface deactivation should include: assessment of the given method's efficiency in removing radioactive contaminants; appraisal of the radiation situation and of its changes in the course of deactivation work; an inquiry into the influence exerted by the deactivation procedure used on hygienic properties of the surface materials; Toxic-hygienic assessment of the substances, solutions and equipment employed; appreciation of the microclimate prevalent at the time of deactivation work, and also means available for the removal of the developing radioactive waste. The listed above elements in the hygienic evaluation of surface deactivation procedures are discussed in detail.

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REEL/FRA
19770458

2 HH

Acc. Nr:

AP0048938

Abstracting Service:

CHEMICAL ABST. 5/70

Ref. Code:

4R0039

104671x Thermodynamics of reactions for the formation of $A + D \leftrightarrow A.D$ -type molecular compounds. Gol'dshteyn, I. P.; Gur'yanova, E. N.; Shcherbakova, E. S. (USSR). *Zh. Obshch. Khim.* 1970, 40(1), 183-91 (Russ). The thermodynamic parameters of ΔH , ΔS , and ΔG were detd. for the series of complexes formed by $SnCl_4$, $SnBr_4$, $TiBr_4$, and $GaCl_3$ with such substances as $MeCN$, $(CH_3OBU)_2$, $(CH_3CH_2OEt)_2$, $(CH_3SBu)_2$, $CH_3(CH_2SBu)_2$, $(CH_3CH_2SBu)_2$, $PhCN$, CH_3CHCN , $EtCN$, Bu_2O , $(C_5H_{17})_2O$, Pr_2S , Bu_2S , $(C_7H_{15})_2S$, and Et_3N , as well as a wide selection of aliphatic esters, sulfides, phosphines and ethers in their complexes with I_2 , BF_3 , BCl_3 , Me_2B ; also included were complexes formed by Ph_2SO , Et_3N , and pyridine with $PhOH$, *p*-methoxy and *m*-Me analogs, as well as isomeric Cl analogs and NO_2 analogs. A linear relation exists between enthalpy of such complex formation and the entropy value. In case of some 81 such complexes this relation is general for donor-acceptor complexes. The linear relation between ΔH and ΔS is based principally on change in the internal degrees of freedom in the process of complex formation. G. M. Kosolapoff

REEL/FRAME

19800710

7A

USSR

UDC: 621.372.8(02)

GOL'DSHTEYN, L. D., ZERNOV, N. V.

"Electromagnetic Fields and Waves. Second Revised and Enlarged Edition"

Elektromagnitnyye polya i volny. Izd. 2-ye, pererabot. i dop. (cf. English above), Moscow, "Sov. radio", 1971, 662 pp, ill. 2 r. 25 k. (from RZh-
-Radiotekhnika, No 6, Jun 71, Abstract No 6B132 K)

Translation: The book presents the fundamentals of electromagnetic field theory. Principal attention is devoted to rapidly alternating fields and to analysis of the properties of radio elements whose theory is based on equations of electrodynamics (for instance waveguides, cavity resonators, etc.). Consideration is also given to the problems of interaction between an electromagnetic field and matter, which make up the theoretical basis of quantum electronics.

1/1

Instrumentation and Equipment

USSR

UDC 669.183:621.746.75

KOZLOV, G. S., BLIZNYUKOV, S. A., YAVOYSKIY, V. I., GOL'DSHTEYN, L. G., and
USHKOVA, A. N., Moscow Institute of Steel and Alloys

"The Use of an Emission Microscope for the Investigation of Micrometallurgical
Processes"

Moscow, Izvestiya Vysshikh Uchebnykh Zavedeniy -- Chernaya Metallurgiya, No 11,
1970, pp 44-49

Abstract: The use of the EF-6 emission microscope for the investigation of new
phase formations in the crystallization process of metals is described. The
EF-6 provides three types of reaction on the test piece: thermo-electron
emission with heating up to 2500°C, controlled primary electron beam action
up to 15 kev, and primary ion flux action of various gases with a disruption
voltage of 20 kev. The EF-6 was used for studying the behavior of nonmetallic
inclusions at the moment of their generation in the steel recrystallization
process in the system Fe-O and in the system Fe-O with deoxidation of non-
metallic inclusions in the melting-crystallization cycles. The temperature
dependence of the wetting of Fe-Si-Mn-O alloys by manganese and iron silicates
is demonstrated.

1/1

GOL'DSHTEYN, L. P.

JPRS 55570

29 Mar 72

UIC: 616-053.2-082:362.11:005

ORGANIZATIONAL AND METHODOLOGICAL WORK AT DONETSKAYA OBLAST HOSPITALS WITH REFERENCE TO MEDICAL CARE FOR CHILDREN

Article by B.A. Urlova, candidate of medical sciences, N.E. Yeliseyeva, L.P. Gol'dshteyn, All-Union Scientific Research Institute of Social Hygiene and Public Health Organization (Inst. N.A. Semashko, Moscow); Donetskaya Oblast Children's Hospital; Donetskaya Oblast Central Clinical Hospital; Moscow, Sovetskoye Zdravookhraneniye, Russian, No. 2, 1972, submitted 28 September 1971, pp 12-16]

There are three oblast hospitals with distinct functions in Donetskaya Oblast. Oblast Hospital (Inst. N.E. Yeliseyeva) is the center for therapeutic and consultative as well as organizational and methodological work related to medical care for the adult population; the Oblast Children's Hospital takes care of the urban child population, and the Oblast Central Clinical Hospital takes care of the rural population, including children.

Donetskaya Oblast is an industrial area. The urban population is larger than the rural (75 and 24, respectively). There are 257 therapeutic and prophylactic institutions with 1,579 pediatricians taking care of the children. Specialized care in polyclinics is rendered by 39 ophthalmological, 42 otorhinolaryngological, 12 surgical, 36 neurological and psychiatric, 31 rheumatological, and 13 endocrinological offices. The oblast hospitals have 7,950 beds for children, including 2,543 in 19 children's therapeutic hospitals.

The Oblast Children's Hospital has a capacity of 500 beds and a polyclinic that can see 500 patients per day; the latter services six pediatric districts of the city and, at the same time, offers consultations; the structure of the Oblast Children's Hospital includes an organizational and methodological office, laboratories with departments for clinical, biochemical and bacteriological examinations, x-ray laboratory, functional diagnostic office, three physiotherapy departments and three offices for therapeutic physical culture, a pathomorphological department with a pathomorphological laboratory.

There are ten specialized departments in the hospital: three therapeutic (160 beds), two infectious (120), two surgical (120) including a department

USSR

UDC: 539.5

Balter, M. A., Gol'dshteyn, L. Ya., Stennik, V. I., Kislitsyn, V. P., Kharkov

"Brittle Rupture Resistance of High-strength Steels in Various Structural States"

Kiev, Problemy Prochnosty, No 4, Apr 72, pp 76-80.

Abstract: The influence of composition, structure and mechanical properties of structural steels on brittle rupture resistance during testing of notched specimens and specimens with preliminarily applied cracks in static bending is studied. It is shown that the method of testing by static bending of specimens with a crack is quite sensitive for evaluation of the brittle strength of high-strength steels in various structural states.

1/1

USSR

UDC 576.651:582.288

MIKHAYLOVA, Ye. K. and GOL'DSHTEYN, L. Ye., Institute of Botany, Academy of Sciences Uzbek SSR

"The Antagonistic Effect of Bacteria Isolated From Soil of Rice Fields on the Agent of Verticillium Wilt of Cotton"

Tashkent, Uzbekskiy Biologicheskii Zhurnal, No 3, 1970, pp 57-58

Abstract: Study of epiphytic microflora in rice fields showed that some of these bacteria exhibited antibiotic and lytic properties toward *Verticillium dahliae* when tested by the grass plot method on Chapek media and wort agar. Of 75 rice-field soil bacteria isolated, 29 have biologically active agents; 11 of these exhibited strong antagonistic properties toward the agent of cotton wilt. More antagonists to *V. dahliae* were from the genus *Bacillus* (five species), and a smaller number from *Bacterium* (three species), *Pseudomonas* (two species), and *Micrococcus* (one species). The strongest antibiotic properties were noted in *Bacterium alcaliaromaticum*, *Pseudomonas pellucidula*, *Bacillus oligonitrophilus*, and *Bacterium sulfureum*. The most promising epiphytic microflora for use in controlling cotton wilt included *Micrococcus cirrhiformis* and *Pseudomonas mycophaga*, which show lytic activity with respect to *V. dahliae*.

1/1

USSR

UDC 669-157:669.15-194.56

GOL'DSHTEYN, M. I., DENISOVA, I. K., ZAKHAROV, V. N., and
KOPYLOVA, V. A., Ural Polytechnic Institute imeni S. M. Kirov

"Change of the Fine Structure of Heat-Resistant Austenitic
Steel During Aging"

Sverdlovsk, Fizika Metallov i Metallovedeniye, Vol 36, No 4,
Oct 73, pp 742-746

Abstract: An experimental study was made of fine structure
changes of three melts (1 - containing Mo, V, and Nb,
2 - not containing Mo and Nb, and 3 - not containing Mo, V,
and Nb) of EI481 austenitic heat-resistant steel in the pro-
cess of aging. The results are discussed by reference to dia-
grams showing the changes in width of the interferential line
(311) α_1 of the austenite, the blocks and microdistortions, the
density of dislocations, and of the lattice parameter. The fine
austenitic structure of steel alloyed with Mo, V, and Nb (melt 1)

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USSR

GOL'DSHTEYN, M. I., et al., Fizika Metallov i Metallovedeniye, Vol 36, No 4, Oct 73, pp 742-746

and alloyed with only V (melt 2) were found to undergo considerable changes during aging; a crushing of blocks and a growing of microdistortions and of the density of dislocations take place. These changes in the structure of the matrix are accompanied by a considerable enlargement of interferential lines and by a change of the lattice parameter. The discussed changes of the fine structure of the matrix together with the influence of the very dispersion particles result in a considerable strengthening of steel in the process of dispersion hardening. Five figures, one table, ten bibliographic references.

2/2

Steels

USSR

UDC 669-15:621.789

BELEN'KIY, B. Z., FARBER, V. M., and GOL'DSHTEYN, M. I., Ural Polytechnic Institute

"Investigation of the Fine Structure of Steel After Deformation in the Course of Perlite Transformation"

Moscow, Izvestiya VUZ, Chernaya Metallurgiya, No 10, 1973, pp 109-113

Abstract: In this article the authors have investigated the structure and properties of 10GN steel after thermomechanical treatment in the course of diffusion decay at the perlite stage. Electron microscropic investigation showed that the microstructure of steel to a significant degree is established by the temperature of plastic deformation. The level of the mechanical properties after various treatments is associated with the formation of a substructure in the ferrite and a modification in the morphology of the perlite.

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USSR

BELEN'KIY, B. Z., et al., Izvestiya VUZ, Chernaya Metallurgiya, No 10, 1973, pp 109-113

Figure 1 is a photograph of the structure of the 10GN steel and Figure 2 is a photograph of the structure of the steel at various temperatures for the substructure and the perlite.

The article contains 2 figures and 11 bibliographic references.

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GOLDSHTEYN, M.I.

Gublin

METALLURGY AND MINERALS

EXPENDITURES IN REPAIR WORK AT METALLURGICAL AGGREGATES

31/6/74

Article by N. V. Gublin, deputy director of the Scientific Research Institute of Ferrous Metallurgy for scientific work, V. Sobolev, chief of the repair work economy laboratory, and N. I. Kabanov, senior laboratory assistant, Moscow, Pravda, Russian, 8 September 1973, p. 2, 64893/1

During the past three years, upwards of five million rubles has been spent on equipment repairs at enterprises of the USSR Ministry of Ferrous Metallurgy. These expenditures exceeded by 300 percent the cost of the production assets of a metallurgical plant as large as the Magnitogorsk Combine.

Today the attention of metallurgists is basically riveted on developing basic production, and repair work is of secondary importance. At the same time, from the point of view of economy, it is no less important a project for improvement than any other technological aspect of metal production. Statistics confirm that the overall cost of repairs at a metallurgical plant is 210 percent more than expenditures on blast furnace shops and 700 percent more than expenditures on pig-iron production.

About two-fifths of all industrial production personnel are engaged in repair in metallurgy. If, however, one takes into consideration the staffs of the repair trusts and collectives supplying these services with refractory materials, and also the expenditures of labor connected with replacing the metal used here, then one finds that one of every two workers in metallurgy is directly or indirectly engaged in repair.

The high growth rates in these expenditures are a pivotal danger. Whereas in 1966 13.7 rubles was spent on each ton of steel in the branch, in 1971 this figure was 17.6 rubles. This signifies that the overall cost of rebuilding the unit has grown by 425 million rubles.

What caused such an undesirable process? There are many reasons. These include intensification of production not supported by adequate reliability and durability of the equipment used, increased reduction in the time

5085 60158 28 Aug 1973

- 25 -

USSR

UDC 669.14.018.29-414

GOL'DSHTEYN, M. I., BLYUM, E. E., GRIN', A. V., SELETKOV, A. I., LITVINENKO, D. A., LEYKIN, I. M., RUDCHENKO, A. V., OREL, E. I., VAYNTRAUB, S. S., LOKTIONOV, P. Ya., LASHCHEV, V. Ya., MOSIOSHVILI, V. V., MIROSHNICHENKO, S. I., and KONDRASHOV, M. M., Ural Scientific Research Institute of Ferrous Metals, Central Scientific Research Institute of Ferrous Metallurgy imeni I. P. Bardin, and Kommunarsk Metallurgical Plant

"Adoption of the Industrial Production of 15G2AF Sheet Steel"

Moscow, Stal', No 9, Sep 70, pp 828-830

Abstract: An investigation of the 15G2AF plate steel (10-25 mm), commercially produced at the Kommunarsk Metallurgical Plant, revealed that alloying of the manganous structural steel with nitrogen and vanadium increases the strength and plasticity properties of the normalized rolled steel. Normalizing of the metal effects a size reduction of the grain (to 10-12), which assures a low (-100°C to -120°C) cold brittleness threshold. The strength of the 15G2AF steel was found to be at least 60 kg/mm² and the yield stress at least 45 kg/mm². Use of 15G2AF steel for welded structures decreased weight, in comparison with steel 10G2S1, by 13.6%.

1/1

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1/2 021 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--CARBIDE FORMATION PROCESSES IN NIOBIUM CONTAINING STEELS DURING A
DIFFUSION CONTROLLED, GAMMA ALPHA TRANSFORMATION -U-
AUTHOR--(03)-GOLOSHTEYN, M.I., SUSLOPAROV, G.D., KOLOSOVA, E.L.

COUNTRY OF INFO--USSR

SOURCE--FIZIKA METALLOV I METALLOVEDENIE, VOL. 29, MAR. 1970, P. 625-631

DATE PUBLISHED----MAR70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--CARBIDE, NIOBIUM CONTAINING ALLOY, METAL BRITTLINESS, ALLOY
DESIGNATION, MANGANESE STEEL, NIOBIUM STEEL, LOW ALLOY STEEL, ALLOY
PHASE TRANSFORMATION, AUSTENITE, METAL FERRITE PHASE/(U)20GB MANGANESE
NIOBIUM STEEL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3001/0071

STEP NO--UR/0126/70/029/000/0625/0631

CIRC ACCESSION NO--AP0125906

UNCLASSIFIED

2/2 021 UNCLASSIFIED PROCESSING DATE--04DEC70
CIRC ACCESSION NO--AP0125906
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. STUDY OF THE FORMATION OF NIOBIUM
CARBIDES IN A HYPOEUTECTOID STEEL 20GB, CONTAINING 0.087PERCENT NB,
DURING THE GAMMA ALPHA TRANSFORMATION. IT IS FOUND THAT THE FORMATION
OF NIOBIUM CARBIDES PROCEEDS IN SEVERAL STAGES: (1) IMMEDIATELY IN THE
SUPERCOOLED AUSTENITE, (2), IN THE PROEUTECTOID FERRITE, AND (3) IN THE
EUTECTOID FERRITE. A RELATIONSHIP IS ESTABLISHED BETWEEN THE
BRITTLINESS OF THIS STEEL AND THE DISTRIBUTION CHARACTERISTICS OF
CARBIDE PARTICLES. FACILITY: URAL'SKII
NAUCHNO-ISSLEDOVATEL'SKII INSTITUT CHERNOI METALLURGII, SVERDLOVSK,
USSR.

UNCLASSIFIED

1/2 018 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--PROCESSES OF CARBIDE FORMATION DURING THE DIFFUSION GAMMA YIELDS
ALPHA TRANSFORMATION IN MOLYBDENUM STEELS -U-
AUTHOR-(03)-KOLOSOVA, E.L., GOLDSHTEYN, M.I., SUSLOPAROV, G.D.
COUNTRY OF INFO--USSR
SOURCE--FIZIKA METALLOV I METALLOVEDENIE, FEB. 1970, 29, (2), 349-357
DATE PUBLISHED----FEB 70
SUBJECT AREAS--MATERIALS
TOPIC TAGS--ALLOY PHASE TRANSFORMATION, CARBIDE PHASE, MOLYBDENUM STEEL,
METAL DIFFUSION
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3003/0338 STEP NO--UR/0126/70/029/002/0349/0357
CIRC ACCESSION NO--AP0129570
UNCLASSIFIED

2/2 018

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0129570

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PROCESS OF CARBIDE FORMATION ASSOCIATED WITH THE DIFFUSION TYPE GAMMA YIELDS ALPHA TRANSFORMATION IN STEELS CONTG. VARIOUS QUANTITIES OF MO WAS STUDIED. THE CARBIDE FORMATION STARTED IN THE SUPERCOOLED AUSTENITE EVEN BEFORE THE ONSET OF THE DIFFUSION TRANSFORMATION. THE GREATER PROPORTION OF THE CARBIDES PRECIPITATED DURING THE TRANSFORMATION FROM THE FERRITE FORMED IN THE COURSE OF THE LATTER. A LOW STABILITY CARBIDE OF THE (MO, FE) SUB23 C SUB6 TYPE WAS FORMED IN THE SUPERCOOLED AUSTENITE; AS THE TRANSFORMATION PROGRESSED, THE STABLER MO. SUB2 C AND (MO, FE) SUB6 C DEVELOPED.

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UDC 536.24:532.52

KAMMIN, M. R., GOLDSTEYN, R. DZH.

"Heat Exchange Between a Turbulent Air Jet and a Spherical Shell"

V sb. Teplo- i massoperenos. T. 9, Ch. 2 (Heat and Mass Transfer. Vol 9. Part 2), Minsk, 1972, pp 74-89 (from RZh--Mekhanika, No 6, Jun 73, Abstract No 6B804)

Translation: A visual representation of flow and a study of the mean heat transfer inside a hollow sphere with jet blowing of its inside surface were performed. The jet emerges from a long round tube placed inside a sphere and hits part of the sphere at the opposite intake of the tube. The flow field is provisionally divided into zones: 1) free jet hitting the concave surface; 2) wall jet propagated along the inside surface of the sphere; 3) recirculation in the cavity of the sphere; 4) the emergence of the flow near the pipe inlet into the sphere.

On visual representation of the flow, the operating medium was water, and the sphere itself for taking the optical effects was submerged in a plane glass reservoir; the dye was a solution of potassium permanganate sprayed into the right-hand cavity of the sphere. As a result of recirculation and multiple movements of the liquid mass, the entire sphere was filled with colored jets; the exit zone of the flow turned out to be very small. The boundary between it and the recirculation zone pulsed constantly, causing additional mixing of the

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KAMMIN, M. R., et al. , Teplo- i massoperenos. T. 9, Ch. 2, Minsk, 1972, pp 74-89

flow between the zones. When studying the heat exchange, tubes were used with a diameter $d = 6.34, 9.51$ and 12.68 mm with a sphere diameter $D_s = 98.9$ mm and variable length of the jet b (the distance between the end of the tube and the opposite point of the sphere) in the range of $R_d = 14,000-40,000$. In order to insure boundary conditions of constancy of the wall temperature $T_s = \text{const}$, the operating element made of thin copper was placed in a reservoir with carefully mixed water heated by a coil. The water temperature drop compared to room temperature was ~ 36 degrees without the blown air, the temperature of which was measured at the exit from the tube T_{b0} and the exit from the sphere T_{bi} . The heat transfer coefficient was calculated with respect to the amount of heat transferred in the sphere to the air, to the logarithmic temperature head and the heat transfer surface. The coefficient of thermal conductivity was calculated by the arithmetic mean temperature $(T_{b0} + T_{bi} + 2T_s)/4$. The bibliography has 11 entries.

2/2

1/2 018 UNCLASSIFIED PROCESSING DATE--090170
TITLE--QUASI ELASTIC SCATTERING OF HIGH ENERGY ELECTRONS ON NUCLEONS OF
CARBON 12 AND SILICON 28 -U-
AUTHOR--(05)-DEMENTIY, S.V., AFANASYEV, N.G., ARKATOV, I.M., VLASENKO,
V.G., GOLDSHTEYN, V.A.
COUNTRY OF INFO--USSR

SOURCE--YAD. FIZ. 1970, 11(1), 19-28

DATE PUBLISHED-----70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--ELECTRON SCATTERING, INELASTIC SCATTERING, CARBON ISOTOPE,
SILICON ISOTOPE, CHERENKOV SCATTERING, HIGH ENERGY PARTICLE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1980/0175

STEP NO--UR/0367/70/011/001/0019/0028

CIRC ACCESSION NO--AP0048467
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PROCESSING DATE--090CT70

2/2 018

CIRC ACCESSION NO--AP0048467

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE RESULTS OF THE MEASUREMENTS OF THE INELASTIC SCATTERING OF 690-, 970-, AND 1115-MEV E ON PRIME12 C AND PRIME28 SI NUCLEI AT 16-40DEGREES ARE PRESENTED. THE SCATTERED E WERE DETECTED BY MEANS OF CHERENKOV COUNTER, THE CONSTRUCTION OF WHICH IS DESCRIBED. NO CORRECTION FOR THE INFLUENCE OF PRIME13 C AND PRIME29,30 SI CONTENT IN THE TARGETS OF NATURAL C (4.97 TIMES 10 PRIME22 NUCLEI-CM PRIME2) AND OF NATURAL SI (1.51 TIMES 10 PRIME12 NUCLEI-CM PRIME2) UPON THE CROSS SECTIONS VALUES WAS MADE BECAUSE OF THEIR LITTLE INFLUENCE. THE GAINED RESULTS WERE ANALYZED BY USING THE THEORY OF THE QUASI ELASTIC SCATTERING. IN ORDER TO MAKE THE PRESENT RESULTS COMPATIBLE WITH THE ELASTIC E SCATTERING ON THE SAME NUCLEI, IT IS NECESSARY TO ACCOUNT FOR INEQUALITY OF POTENTIALS IN DIFFERENT NUCLEAR SHELLS AS WELL AS THE DYNAMICAL CORRELATIONS OF N IN NUCLEI. FACILITY:

FIZ.-TEKH. INST., KHARKOV, USSR.

UNCLASSIFIED

USSR

UDC 656.25.071.64.002.56

SHAYEVSKIY, N. A., GIL'BURD, L. M., Chief Designers of the Odessa Branch of the Central Design Office of the Ministry of Railways, ODINTSOVA, A. I., GOL'DSHTEYN, V. P., Design Engineers

"IKI-ST Meter for Fringe Distortions of Telegraph Signals"

Moscow, Avtomatika, Telemekhanika i Svyaz, No 10, 1971, pp 11-14

Abstract: The technical specifications, operating conditions, speed control conditions, and transmitter contact regulation of the IKI-ST meter which measures fringe distortions of telegraph signals with high accuracy are discussed. The meter has been prepared for series production at the Odessa Promsvyaz' Plant. It is designed to measure the distortions of single-current and double current signals code No 2, to regulate the transmitter contacts of the telegraph set, and to monitor and control the telegraph speed. Provision is made to measure distortions at speeds of 50, 75 and 100 baud. The measurement of the start-stop distortions is based on the start-stop method of receiving code combinations and comparison of the proposed characteristic modulation times developed by the meter with the actual reproduction times of the signal reaching the inputs of the meter. The operation of the device is illustrated by diagrams.

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USSR

UDC 621.385:530.145.6:623

GOLDSHTEYN, Ye. L.

"Effect of Mode Composition of an Information Signal on Noise Immunity for Heterodyne Optical Reception"

Materialy nauchno-tekhn. konferentsii. Leningr. elektrotekh. in-t svyazi.
Vyp. 2 (Materials of the Scientific and Technical Conference. Leningrad
Electrotechnical Communications Institute, Vyp. 2 (Leningrad, 1970 pp 86-91
(from RZh-Radiotekhnika, No 8, Aug 70, Abstract No 8 D398)

Translation: This article contains a study of the effect of the mode composition of an information signal on the noise immunity of heterodyne reception. It is demonstrated that in the presence of higher types of oscillations, the maximum allowable inaccuracy in adjusting the receiver insuring the allowable drop in intermediate frequency signal intensity and, consequently, the allowable drop in noiseproofness of the receiver increases.

1/1

USSR

UDC: 621.396.677.833.3

COLDSHTEYN, Yu. A., KAPLYANSKIY, A. A.

"Concerning the Question of Required Accuracy in Measuring the Parameters of the Large Reflector in a Two-Reflector Antenna With Phase Correction"

V sb. Materialy Nauch.-tekhn. konf. Leningr. elektrotekhn. in-t svyazi. Vyp. 3 (Materials of the Scientific and Technical Conference of Leningrad Electrical Engineering Institute of Communications--collection of works, No 3), Leningrad, 1971, pp 257-259 (from RZh-Radiotekhnika, No 3, Mar 72, Abstract No 3B62)

Translation: Relations are presented which define the parameters of the small correcting reflector, assuming that the main reflector has an arbitrary shape; the required accuracy of measuring the parameters of the reflector is estimated. Bibliography of two titles. Résumé.

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